

GAO

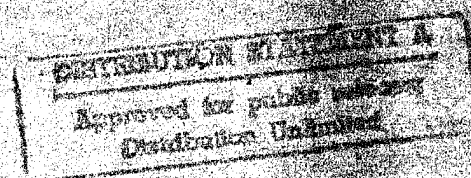
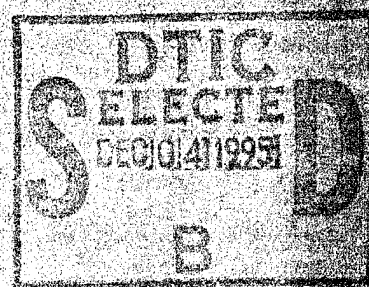
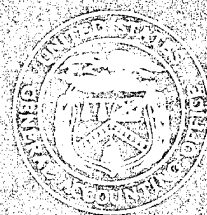
UNITED STATES GOVERNMENT ACCOUNTING OFFICE

Report to the Ranking Member,
Committee on National Security, House
of Representatives

December 1995

MILITARY EQUAL OPPORTUNITY

Certain Trends in Racial and Gender Data May Warrant Further Analysis



19951201 026

DTIC QUALITY INSPECTED 6

National Security and
International Affairs Division

B-261469

November 17, 1995

The Honorable Ronald V. Dellums
Ranking Minority Member
Committee on National Security
House of Representatives

Dear Mr. Dellums:

Department of Defense (DOD) policy holds that discrimination that adversely affects persons based on race, national origin, gender, or other factors is counterproductive to combat readiness and mission accomplishment and contrary to good order and discipline. In response to your request expressing concern that inequality of treatment and opportunity could be affecting some of the more than 1.5 million active-duty military servicemembers, we initiated three separate reviews. In April 1995, we issued a report that identified studies done by DOD during the past 20 years on discrimination in the military.¹ In another review, we are examining the services' systems for handling discrimination complaints from active-duty servicemembers and will report on this issue later. For this report, we

- reviewed Military Equal Opportunity Assessments (MEOA) prepared by the military services and the use of those assessments by the Office of the Secretary of Defense in monitoring the services' equal opportunity programs and
- examined certain active-duty personnel data to determine whether possible racial² or gender disparities in selection rates existed.

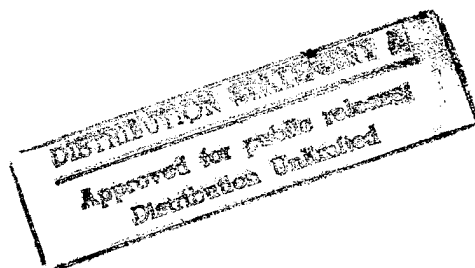
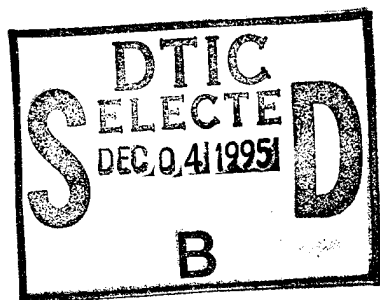
The methodology we used is one of several approaches that can be used to identify possible racial or gender disparities in selection rates to help DOD identify areas for further analysis. We did not evaluate whether any disparities identified were evidence that discrimination had occurred. Discrimination is a legal determination that would involve other corroborating information along with supporting statistics. Further, we did not identify the causes of any racial or gender disparities, and the results of our work alone should not be used to make conclusions about DOD's personnel management practices.

¹Equal Opportunity: DOD Studies on Discrimination in the Military (GAO/NSIAD-95-103, Apr. 7, 1995).

²DOD defines five racial categories as (1) American Indian or Alaskan Native, (2) Asian or Pacific Islander, (3) black (not of Hispanic origin), (4) Hispanic, and (5) white (not of Hispanic origin). For purposes of this report, we refer to these groups as American Indian, Asian, black, Hispanic, and white, respectively.

Nov 95

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



Military Equal Opportunity:
Certain Trends in Racial and Gender Data May Warrant Further Analysis

Background

Active-duty military personnel are not covered by Title VII of the Civil Rights Act of 1964, as amended, or the implementing governmentwide equal employment opportunity and affirmative action regulations and guidelines of the Equal Employment Opportunity Commission. However, the Secretary of Defense has established a separate equal opportunity program with similar requirements for these personnel.

In 1969, the Secretary of Defense issued a Human Goals Charter that remains the basis for DOD's equal opportunity program. It states that DOD is to strive to provide everyone in the military the opportunity to rise to as high a level of responsibility as possible based only on individual talent and diligence. The charter also states that DOD should strive to ensure that equal opportunity programs are an integral part of readiness and to make the military a model of equal opportunity for all, regardless of race, color, sex, religion, or national origin.

To help ensure equal opportunity in the services, a 1988 DOD directive and related instruction require that the services prepare annual MEOAs.³ In preparing their MEOAs, the services collect, assess, and report racial and gender data in 10 categories.⁴ The Deputy Assistant Secretary of Defense for Equal Opportunity (DASD(EO)) is primarily responsible for monitoring the services' equal opportunity programs, including preparing written analyses of the services' MEOAs and a DOD summary.⁵

As recently as March 1994, the Secretary of Defense reaffirmed DOD's equal opportunity goals, stating that equal opportunity is a military and an economic necessity. While noting that DOD has been a leader in equal opportunity, the Secretary stated that it can and should do better. He initiated several measures, including a major DOD study looking at ways to improve the flow of minorities and women into the officer ranks from recruitment through high-level promotions.

³DOD Directive 1350.2, DOD Military Equal Opportunity Program, dated December 23, 1988, and DOD Instruction 1350.3, Affirmative Action Planning and Assessment Process, dated February 29, 1988.

⁴The 10 MEOA reporting categories are (1) recruiting/accessions, (2) force composition, (3) promotions, (4) professional military education, (5) separations, (6) augmentation (reserve officers transferring to an active-duty component) and retention, (7) assignments (those considered career enhancing), (8) discrimination or sexual harassment complaints, (9) utilization of skills (skill categories with high or low concentrations of minorities or women), and (10) discipline.

⁵DASD(EO) is within the Office of the Assistant Secretary of Defense for Force Management Policy, Office of the Under Secretary of Defense for Personnel and Readiness. DASD(EO) was created in 1994. Previously, the Assistant Secretary of Defense for Personnel and Readiness was tasked with these responsibilities.

Results in Brief

MEOAs are not as useful as they could be for monitoring the services' equal opportunity programs. Overall, the analytical approach did not consistently identify and assess the significance of possible racial or gender disparities, the services reported on most of the MEOA categories differently, and some data that would be helpful in conducting more complete analyses was not required to be reported. In addition, DASD(EO) and his predecessors have not prepared the required annual analyses of the services' MEOAs or the DOD summaries.

Using MEOA and other data for fiscal years 1989 through 1993, we analyzed accessions, assignments considered career enhancing, and promotions to identify possible racial or gender disparities in selection rates. Our analysis showed statistically significant disparities in each of the three categories, although the number of disparities varied by category and service and by race and gender.⁶ It is important to note that the existence of statistically significant disparities does not necessarily mean they are the result of unwarranted or prohibited discrimination. Many job-related or societal factors can contribute to racial or gender disparities. Further analyses would be required to determine the cause(s) of these disparities.

We are making several recommendations to the Secretary of Defense for improving the usefulness of the services' MEOAs.

MEOAs Can Be Improved

According to DASD(EO)'s Director of Military Equal Opportunity, MEOAs are the primary source of information for monitoring the services' equal opportunity programs. While MEOAs provide some useful information, the analyses of this information did not consistently identify and assess the significance of possible racial or gender disparities. In addition, data for 9 of the 10 MEOA reporting categories was reported inconsistently among the services. For the promotion and separation categories, some key data that would be helpful in understanding the progression of minorities and women through the ranks was not required to be reported.

DOD Is Not Consistently Identifying the Significance of Possible Disparities

In analyzing the outcomes of an organization's personnel actions for possible racial or gender disparities, Equal Employment Opportunity Commission guidance recommends using the racial and gender composition of the eligible pool as a basis for comparison. All other things being equal, the racial and gender makeup of persons selected for a

⁶Throughout this report, we use the term "statistically significant" to denote those instances where the likelihood of the outcome having occurred randomly is less than 5 percent.

particular action should—over time—reflect the racial and gender composition of the eligible pool. In other words, the likelihood or odds of a particular outcome occurring for a minority group should be about the same as for the majority or dominant group in the long run.⁷ When the actual odds are less and the difference is statistically significant, and patterns or trends are identified, further analysis would be necessary to determine the cause(s) of the disparity.

Seven of the 10 MEOA reporting categories lend themselves to comparing the odds of a minority group member being selected to the odds of a dominant group member being selected. However, the DOD directive and the related instruction do not require such an analysis, and none was done by the services. The services did make some comparisons to the group average; that is, they compared a minority group selection rate to the overall selection rate for all groups (minority and majority). But because the minority group was usually so small compared to the total group, disparities in the minority group selection rate compared to the overall group rate often were not detected or appeared insignificant. Also, this approach is not helpful in identifying trends or patterns.

Statistical significance testing can provide a basis to determine if a disparity in the odds of being selected for a minority group compared to the odds of the majority group is due to random chance. Statistical significance testing, over time, can also assist in identifying trends or patterns in equal opportunity data that may warrant further analysis. In the fiscal year 1993 MEOAS (the latest available), only the Army routinely reported statistical significance testing results. The Marine Corps and the Navy reported some statistical significance testing. The Air Force did not report any statistical significance testing.

While the DOD instruction on preparing MEOAS encourages the use of statistical significance testing, its use is not required, and instructions on how to conduct such tests are not provided. All four of the officials responsible for preparing the MEOAS for their respective service said they did not have prior experience in analyzing equal opportunity data and that DOD's instruction was not particularly helpful.

Services Reported MEOA Data Differently

In analyzing the services' 1993 MEOAS, we found that the MEOA reporting requirements were addressed differently by one or more of the services in

⁷The odds of a group member being selected for an outcome is determined by dividing the number of individuals selected by the number not selected.

9 of the 10 categories. Only the promotion category appeared to be consistently reported. In most instances, definitions and interpretations of what is called for were not consistent among the services. In some cases, one or more of the services did not comply with the DOD instruction. Following are examples of some of the inconsistencies we found:

- The Army specifically reported accessions for its professional branches, such as legal, chaplain, and medical. The other services did not.
- The Air Force, the Army, and the Navy reported on officers who had been separated involuntarily. But the Army did not separately report officers who had been separated under other than honorable conditions or for bad conduct. The Marine Corps did not report any separation data for officers.
- The Air Force, the Army, and the Navy provided enlisted and officer assignment data by race and gender. The Marine Corps combined into one figure its data on selections to career-enhancing assignments for its O-2 through O-6 officers for each racial and gender category and did not provide any information on its enlisted members.
- The Air Force, the Marine Corps, and the Navy reported discrimination or sexual harassment complaints by race and gender. The Army did not identify complainants by race and gender.
- The Army reported utilization of skills data by each racial category and for women. The Air Force reported skills data for blacks, Hispanics, and women. The Marine Corps and the Navy combined the racial categories into one figure for each skill reported and did not report on women.
- The Air Force and the Army included officers in their reports on discipline. The Marine Corps and the Navy did not.

Certain Useful Data Is Not Required for Two MEOA Categories

Two important factors in analyzing the progression of minorities and women in the services are how competitive they are for promotions and whether they are leaving the services at disproportionate rates. These factors have been of concern in the officer ranks. In March 1994, the Secretary of Defense directed that a study of the officer "pipeline" be conducted. This study is still underway but is addressing ways to improve the flow of minorities and women through the officer ranks. Although DOD's MEOA guidance requires reporting on promotions and separations, it does not require the services to report racial and gender data for all promotions or voluntary separations.

The guidance requires the services to report racial and gender data in their MEOAs for promotions that result from a centralized servicewide selection process. For enlisted members, this includes promotions to E-7, E-8, and

E-9; for officers, this includes promotions to O-4, O-5, and O-6. For the most part, promotions at the lower ranks are not routinely assessed. In addition, the MEOA data for officers in each of the services and enlisted members in the Marine Corps is limited to those promotions that occurred "in the zone."⁸ We noted that about 900, or about 8 percent, of the services' officer promotions and about 500, or about 19 percent, of Marine Corps enlisted promotions in fiscal year 1993 were not reported and were from either below or above the zone. Without routinely assessing promotions in the lower ranks and in each of the promotion zones for possible racial or gender disparities, the services' ability to identify areas warranting further analysis is limited.

The services are also required to report in their MEOAs racial and gender data on involuntary separations, such as for reduction in force or medical reasons, but are not required to report on the great majority of separations that are for voluntary reasons. In fiscal year 1993, about 163,500 enlisted members and about 16,400 officers voluntarily left the services for reasons other than retirement. Analyzing this data for racial or gender disparities could increase the services' understanding of who is leaving the services and help focus their efforts in determining why.

DASD(EO) Has Not Analyzed the MEOAs

DASD(EO) and his predecessors have not provided the services with analyses of their MEOAs and have prepared a DOD summary only on 1990 data, even though both have been required annually since fiscal year 1988. Although one Marine Corps official recalled receiving the summary, she said that it was not helpful or constructive. In addition, some of the service officials responsible for their service's MEOAs said the assessments were done primarily to satisfy the DOD requirement. They noted that, except for the promotion category, MEOAs generally received little attention outside the services' equal opportunity offices.

Although DASD(EO) acknowledges these problems, they continue. The DOD instruction calls for the services to submit their MEOAs for the prior fiscal year by February 1 each year and for DASD(EO) to complete its analyses within 90 days. The 1993 MEOAs were not all received by DASD(EO) until

⁸Officer promotion selection boards consider three cohort groups known as "below the zone," "in the zone," and "above the zone." Most promotions are in the zone, which is considered the normal range or length of service for promotion for that cohort group. However, a relatively small number of promotions go to officers who have demonstrated outstanding leadership potential and are promoted ahead of their cohort group, or below the zone. Similarly, a small number of promotions go to officers who are promoted after their cohort group, or above the zone. A similar system is used for enlisted promotions in the Marine Corps. The other services have different procedures, but each told us that all enlisted promotions were reported in MEOA.

May 1994. As of the end of June 1995, DASD(EO) had not provided its 1993 MEOA analyses to the services, and the 1994 MEOAs have not been completed by all the services.

Analysis Shows Some Statistically Significant Disparities

To identify possible disparities, we analyzed three MEOA categories—accessions, assignments, and promotions—for fiscal years 1989 through 1993. We compared each minority group—American Indian, Asian, black, and Hispanic—to the dominant white group and compared females to males. The analytical approach we used is one of several methods for analyzing and identifying trends in equal opportunity data. It compares the odds of selection from a particular racial or gender group to the odds of selection from the dominant group for a particular outcome. Used as a managerial tool, this methodology is especially well suited to analyzing various outcomes for racial and gender groups of very different sizes and selection rates. Appendix I contains a more detailed explanation of our methodology, including our rationale for using this approach rather than alternative approaches.

Our analysis showed some racial or gender disparities, although the number of disparities varied considerably among the MEOA categories, across the services, and by race and gender. Appendix II presents our detailed results.

Conclusions about DOD's personnel management practices cannot be based solely on the existence of statistically significant disparities. Further analysis would be necessary to determine why the disparities occurred. Certain job criteria or selection procedures may have an adverse impact on one or more groups, but if the criteria or procedure can be shown to accurately measure required job skills, the impact could be warranted. Additionally, a group's social characteristics may lead to disparities; for example, a group's low interest or propensity to serve in the military could help explain its lower odds of entering the services.

Accessions

MEOAs did not report information on the eligible pools for accessions. At the suggestion of the DOD Office of Accession Policy, we used certain data from the Defense Manpower Data Center for the eligible pools. For enlisted accessions, we used the gender and racial makeup of persons who had taken the Armed Forces Qualification Test. This meant the individual had expressed interest in the military and had made the time and effort to take the initial tests for entrance into the services. Because comparable

eligible pool data for officers was not available, the DOD Office of Accession Policy suggested we use civilian labor force data for college graduates between 21 and 35 years old as the eligible pool. This data provides a comparison to the overall racial and gender composition of this portion of the U.S. population but does not account for an individual's interest or propensity to serve in the military, which may vary by race and gender.

Using these eligible pools, we found statistically significant racial and gender disparities that may warrant further analysis. For example, in all the services, Asians had statistically significant lower odds of entering as either an enlisted member or officer in nearly all the years examined; the odds of blacks and Hispanics entering the Air Force as either an enlisted member or officer were statistically significantly lower than whites in most of the years we examined; and in the Army, Hispanics had statistically significantly lower odds than whites of entering the officer corps.

Assignments

For the eligible pool for career-enhancing assignments, we used the numbers of enlisted members and officers eligible for such assignments reported in each of the services' MEOAS. In the three services we examined, we found that the odds of enlisted and officer minorities being selected for these assignments were not statistically significantly different from whites in most instances.⁹ An exception, however, was Asian officers in the Navy. As a group, they had statistically significant lower odds than whites of being selected for most assignments. In addition, the odds of Air Force and Navy women officers being selected for many of the assignments in the years we examined were statistically significantly lower than the odds of selection for their male counterparts.

Promotions

Like assignments, we used the eligible pool data for promotions reported in the services' MEOAS. In about 37 percent of the enlisted (E-7, E-8, and E-9) and officer (O-4, O-5, and O-6) promotion boards we examined, one or more minority groups had statistically significant lower odds of being promoted than whites. We found statistically significant lower odds of minorities being promoted compared to whites most often (1) for blacks, (2) at the E-7 and O-4 levels, and (3) in the Air Force. On the other hand, the odds of females being promoted were not statistically significantly

⁹Our analysis was limited to the Air Force, the Army, and the Navy because the Marine Corps did not provide sufficient data in its MEOA for a meaningful analysis.

different or were greater than the odds for males in nearly all the enlisted and officer boards we examined.

Recommendations

To help make the services' MEOAS more useful in monitoring the services' equal opportunity programs, we recommend that the Secretary of Defense direct DASD(EO) to do the following:

- Devise methodologies for analyzing MEOA data that would more readily identify possible racial and gender disparities than current methods permit and establish criteria for determining when disparities warrant more in-depth analyses. The Secretary may wish to consider the methodology we used in this report, but other methods are available and may suit the purposes of MEOAS.
- Ensure that the services (1) use comparable definitions and interpretations in addressing the MEOA categories and (2) provide complete information for each of the MEOA categories.
- Prepare the analyses of the services' annual MEOAS and the DOD summary, as required.

Agency Comments and Our Evaluation

In commenting on a draft of this report, DOD concurred with the report and stated that it has already initiated several efforts to make the recommended improvements. DOD's comments are reproduced in appendix III.

Scope and Methodology

To evaluate whether MEOAS provided DASD(EO) with sufficient information to effectively monitor the services' equal opportunity programs, we reviewed the services' MEOAS for fiscal years 1989 through 1993. In addition, we analyzed the services' fiscal year 1993 MEOA—the latest available at the time of our review—for reporting completeness and consistency. We reviewed the DOD directive and instruction governing the military's equal opportunity program. We discussed preparation of MEOAS with cognizant officials in the services and DASD(EO)'s Office of Military Equal Opportunity.

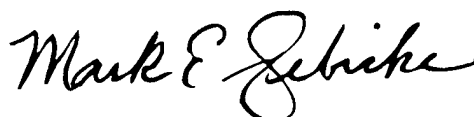
To determine whether possible racial or gender disparities in selection rates existed, we analyzed military accessions, assignments, and promotions for active-duty enlisted members and officers. We chose to analyze these categories because relatively large numbers of servicemembers were involved and, for the most part, the necessary data

was readily available. For accessions, we used data from the Defense Manpower Data Center. For assignments and promotions, we used data from the services' MEOAS. We did not independently verify the accuracy of the data. We performed our review from January 1994 to April 1995 in accordance with generally accepted government auditing standards.

We are sending copies of this report to the Chairmen and Ranking Minority Members of the Senate Armed Services Committee and the Senate and House Committees on Appropriations; the Chairman, House Committee on National Security; the Secretaries of Defense, the Air Force, the Army, and the Navy; and the Commandant of the Marine Corps. Copies will also be made available to others upon request.

Please contact me at (202) 512-5140 if you or your staff have any questions concerning this report. Major contributors to this report are listed in appendix IV.

Sincerely yours,



Mark E. Gebicke
Director, Military Operations and
Capabilities Issues

Contents

Letter		1
Appendix I		14
Odds Ratio	Reducing the Number of Calculations	15
Methodology		
Appendix II		17
Results of Racial and	Accessions	17
Gender Disparity	Assignments	22
Analysis	Promotions	30
Appendix III		37
Comments From the		
Department of		
Defense		
Appendix IV		40
Major Contributors to		
This Report		
Figures	Table II.1: Odds Ratios for Enlisted Accessions, Fiscal Years 1989-93	20
	Table II.2: Odds Ratios for Officer Accessions, Fiscal Years 1989-93	21
	Table II.3: Odds Ratios for Air Force Enlisted and Officer Career-Enhancing Assignments, Fiscal Years 1989-93	23
	Table II.4: Odds Ratios for Army Enlisted and Officer Career-Enhancing Assignments, Fiscal Years 1989-93	25
	Table II.5: Odds Ratios for Marine Corps Officer Career-Enhancing Assignments, Fiscal Years 1989-93	27
	Table II.6: Odds Ratios for Navy Enlisted and Officer Career-Enhancing Assignments, Fiscal Years 1989-93	28
	Table II.7: Odds Ratios for the Services' Enlisted Promotion Boards, Fiscal Years 1989-93	31
	Table II.8: Odds Ratios for the Services' Officer Promotion Boards, Fiscal Years 1989-93	34

Contents

Abbreviations

DOD	Department of Defense
DASD(EO)	Deputy Assistant Secretary of Defense for Equal Opportunity
MEOA	Military Equal Opportunity Assessment

Odds Ratio Methodology

The Equal Employment Opportunity Commission has established policies and procedures for federal agencies to collect and analyze data on civilian personnel actions such as hiring, assignments, and promotions to determine whether selection procedures adversely affect any race, sex, or ethnic group. Although these policies and procedures do not apply to active-duty military personnel, the Department of Defense (DOD) directive and instruction related to its military equal opportunity program set forth similar requirements.

We chose not to use the “four-fifths” rule described in the Commission’s guidance for determining whether adverse impact may have occurred.¹ As pointed out by the Commission, the four-fifths rule is a “rule of thumb” and has limitations. For example, when the relevant groups are very large—as in the military—differences in the ratio of the two selection rates greater than four-fifths may be statistically significant; that is, areas of possible adverse impact may not be detected if just the four-fifths rule is used.

Therefore, to determine whether possible racial or gender disparities existed in the military services’ personnel actions that we examined, we used an “odds ratio” methodology. This methodology is especially well suited to analyzing various outcomes for racial and gender groups of very different sizes and selection rates. Use of this methodology also enabled us to do analyses that are more sensitive to changes in the relative numbers of women and minorities than the more traditional method, which compares selection rates (the number selected divided by the total number eligible).

The odds of a particular group member being selected for an outcome is determined by dividing the number of individuals selected by the number not selected. An “odds ratio” is the odds of one group member being selected divided by the odds of another group member being selected for that same outcome. If the odds of being selected for both group members are equal, the ratio will be one. When the ratio is not equal to one, the methodology allows us to determine whether the difference is statistically

¹According to the guidance, a selection rate for any group that is less than four-fifths of the rate for the group with the highest rate will generally be regarded by federal enforcement agencies as evidence of adverse impact. If a procedure is determined to have adverse impact, agencies must revise the selection procedure to eliminate the adverse impact or provide evidence that the procedure accurately measures required job skills. A number of factors, however, must be considered in arriving at a final determination. For example, affirmative action efforts may occasionally affect other groups’ selection rates and lead to a preliminary finding that adverse impact occurred. However, instances of adverse impact related to bona fide affirmative action efforts are permitted under the guidelines.

significant, that is, whether it is likely due to random chance or not.² For purposes of this report, we use the term statistically significant to denote those instances where the likelihood of the outcome having occurred randomly is less than 5 percent.

Reducing the Number of Calculations

The odds ratio methodology is relatively straightforward but can involve a large number of calculations and comparisons. If we had calculated odds ratios for each racial and gender group for each personnel action outcome in the three Military Equal Opportunity Assessment (MEOA) categories we examined—accessions, career-enhancing assignments, and promotions—almost 3,000 odds ratios would have been needed. Instead of performing all these calculations, we used “modeling” techniques to determine how race and gender affected the reported outcomes for the three sets of data. Once we understood the effect race and gender had on the outcomes, we had to calculate and analyze only the odds ratios that significantly affected the actual outcomes. For each personnel action, we considered five different models, as follows:

- Model one assumed that race and gender had no effect on the outcome of accessions, assignments, or promotions.
- Model two assumed that only gender had an effect—that is, all racial groups would have equal odds of being selected for the outcome, but males and females would not.
- Model three assumed just the opposite—males and females would have equal odds of being selected, but the racial groups would not.
- Model four assumed that both race and gender affect the odds of selection independently of one another. In other words, the odds ratios indicating the difference between males and females in one racial group would be the same as the corresponding ratios in the other groups.
- Model five assumed that both race and gender had an effect and that the two factors operated jointly. That is, the odds ratios describing racial differences varied by gender, and the odds ratios describing gender differences varied by racial group.

²For enlisted accessions and officer and enlisted assignments and promotions, we used the chi-square distribution to determine the statistical significance of the observed differences between race and gender categories. Basically, this method tests the hypothesis that the mean (or average) frequencies of a particular occurrence are distributed in the same proportions from category to category. For officer accessions, the number of persons in the eligible pool was so large (millions of people) that small variations in the odds ratios using the chi-square method showed up as significant. To help make sure the population sizes were not distorting the results, we used the Bayesian approach, which is considered a better test for statistical significance when large sample sizes are involved.

Determining which model to use required two steps. First, using statistical software, we created a hypothetical database for each model essentially identical to the actual data but modified to reflect the assumptions we made. For example, the hypothetical database created for the third model assumed that the odds of males and females being selected would be equal (that is, the odds ratio would be 1.0). Second, the hypothetical odds ratios were compared to the actual odds ratios for each of the personnel actions. If there were significant differences, we rejected the model's assumptions.³

In virtually all instances, model four was the most appropriate and preferred way to present the results. Its overall results were not significantly improved upon by any of the other models. This meant that for the personnel actions we analyzed, we only needed to calculate the odds ratios for each racial and gender group compared to whites and males, respectively (see app. II). We did not have to calculate the odds ratios for males and females within each racial group because, according to the model, the gender difference was the same across racial groups.

³Davis, James A., "Hierarchical Models for Significance Tests in Multivariate Contingency Tables: An Exegesis of Goodman's Recent Papers," from Analyzing Qualitative/Categorical Data: Log-Linear Models and Latent Structure Analysis, by Leo Goodman, University Press of America, 1978.

Results of Racial and Gender Disparity Analysis

This appendix presents the odds ratios we calculated for each of the three MEOA categories we examined—accessions, assignments, and promotions. Some ratios are much less than 1 (less than three one-thousandths, for example) or much greater (over 16,000, for example). Such extremes occurred when the percentage of persons selected from a small-sized group was proportionately very low or very high compared to the percentage selected from the dominant group.

Our tests of statistical significance, however, took group size into account. Therefore, although many odds ratios were less than one (some much less), the disparity was not necessarily statistically significant. In the tables in this appendix, we have shaded the odds ratios that indicate possible adverse impact; that is, the ratios are less than one and statistically significant. A more in-depth analysis would be warranted to determine the cause(s) of these disparities.

As discussed in appendix I, we compared the odds for females with those for males and the odds of minority racial groups with those for whites. To help the reader remember the relationships in our tables, we have labeled the top of each column listing odds ratios with the gender or racial group and symbols of what the proper comparison is. For example, F:M means the ratio compares the odds of females to males and B:W means the ratio compares the odds of blacks to whites for the particular outcome being analyzed.

The odds ratios can also be used to make certain comparisons within and among the services and identify trends whether they are statistically significant or not. If the objective, for example, is to increase the representation of a particular minority group vis-a-vis whites, the odds ratio should be greater than one. When it is not, it means whites are being selected in proportionately greater numbers than the minority group.

Accessions

Tables II.1 and II.2 present the odds ratios for enlisted and officer accessions, respectively. We compared gender and racial data for those entering the military to the gender and racial composition of selected eligible pools. In determining what to use for the eligible pool, we conferred with officials in DOD's Office of Accession Policy.

For the enlisted member eligible pool, we used those men and women who had taken the Armed Forces Qualification Test and scored in the top three

mental categories during the respective fiscal year.¹ These were generally high school graduates who had been initially screened by the recruiter for certain disqualifying factors such as a criminal record or obvious physical disabilities. Using test takers as the eligible pool also took into account the propensity to serve in the military, since the men and women taking the test had to make the time and effort to do so. Moreover, this data was readily available from the Defense Manpower Data Center.

For officers, determining a relevant eligible pool was not as precise. Officers primarily come from Reserve Officers' Training Corps programs, officer candidate schools, and the military academies, but no information was reported on the racial and gender makeup of the programs' applicants in the services' MEOAS, nor was it available from the Defense Manpower Data Center. At the suggestion of DOD's Office of Accession Policy, we used national civilian labor force gender and racial statistics for college graduates 21 to 35 years old as the eligible pool. This data was readily available from the Defense Manpower Data Center, and nearly all officers have college bachelor's degrees and are in this age group when they enter the service.

We could not account for an individual's propensity or desire to serve as a military officer using civilian labor force data. While our analyses highlight those racial groups that entered the services' officer corps at lower rates or odds compared to whites based on their representation in the civilian labor force, further analyses would be necessary to determine why this occurred.

In both tables we present the odds ratios for females compared to males. In each of the 5 years we reviewed and across the services, the odds of women entering the services were statistically significantly lower than for men. This fact is not surprising considering that women's roles in the military are limited and they may, as a group, have less interest or propensity to serve in the military than men. Even in recent years when the restrictions have been loosened, the services have not reported accessing more than about 14 percent of women for the enlisted ranks and about 19 percent for the officer ranks, compared to over 50 percent representation in the civilian labor force. Nevertheless, we present the data to illustrate the disparities among the services. For example, in fiscal year 1993, the odds of women in our eligible pool entering the Marine Corps as officers were less than one-tenth the odds for men. In contrast,

¹The categories are labeled I, II, and III. Category III is divided between IIIA and IIIB at the 50-percentile level. Around 99 percent of those entering the military services in recent years scored in test categories IIIB or higher.

Appendix II
Results of Racial and Gender Disparity
Analysis

for the same year, the odds of women entering the Air Force as officers were about one-third the odds for men.

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.1: Odds Ratios for Enlisted Accessions, Fiscal Years 1989-93

Service	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
Air Force	1989	0.3246	0.8346	0.7213	0.6309	0.8563	0.4104
	1990	0.1252	0.2633	0.4215	0.8971	0.6061	0.1634
	1991	0.3978	2.5904	3.5892	1.1105	1.4828	0.8369
	1992	0.3809	0.6776	0.7395	0.6523	0.6375	0.4771
	1993	0.3932	1.2733	0.6830	0.8424	0.9587	0.7079
Army	1989	0.5707	1.0259	0.9740	1.7275	1.1106	0.6259
	1990	0.4700	1.1959	0.7632	1.7077	1.1457	0.6785
	1991	0.4907	2.0607	3.7695	2.1586	3.0425	1.1023
	1992	0.3159	0.9978	0.6999	1.6208	0.9522	0.5756
	1993	0.4307	1.0063	0.8436	1.4202	1.0772	0.8162
Marines	1989	0.3072	0.8058	0.7965	0.8836	0.6184	0.4782
	1990	0.3434	1.0491	0.7631	1.1298	0.9094	0.7803
	1991	0.4955	2.5845	6.2641	1.5317	1.9237	0.4983
	1992	0.3155	1.3822	0.6776	1.1631	0.8605	0.6593
	1993	0.2576	0.9234	0.8480	1.0089	0.9883	1.5887
Navy	1989	0.4450	0.9612	1.0312	1.5154	1.0672	0.4530
	1990	0.6494	1.0114	0.8605	1.3716	1.0829	0.4947
	1991	0.3554	1.7207	10.2167	2.1888	3.0546	0.3597
	1992	0.7898	1.1508	1.0469	1.4136	1.0625	0.4143
	1993	0.1778	0.9498	0.8131	1.9378	4.0485	0.2592

Shaded areas indicate ratios that are less than one and statistically significant.

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.2: Odds Ratios for Officer Accessions, Fiscal Years 1989-93

Service	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
Air Force	1989	0.2823	0.6201	0.3455	0.8149	0.3542	11.3788
	1990	0.2748	1.3342	0.2880	0.8476	0.3132	10.7842
	1991	0.2866	0.5295	0.3328	0.7949	0.2905	9.3175
	1992	0.2832	0.5176	0.2366	0.6004	0.1913	8.7918
	1993	0.3455	0.4113	0.2439	0.6148	0.1236	10.0553
Army	1989	0.1899	1.6941	0.4732	1.7457	0.7582	4.5896
	1990	0.1954	2.2505	0.4671	1.8388	0.8488	4.5151
	1991	0.2030	1.5553	0.4613	1.6969	0.6189	6.6045
	1992	0.2136	1.4791	0.3894	1.3321	0.4456	5.7880
	1993	0.2237	1.3078	0.3556	0.8872	0.3134	3.6086
Marines	1989	0.0564	5.8339	0.3476	1.0745	1.7027	1.5552
	1990	0.0352	7.3022	0.3259	0.8634	1.1267	1.7159
	1991	0.0499	13.6992	0.2495	0.7487	1.0688	0.6611
	1992	0.0380	2.8568	0.2462	0.8579	0.7532	1.9926
	1993	0.0754	0.5528	0.2388	0.7441	0.5559	2.1194
Navy	1989	0.1497	1.2769	0.5957	0.7993	1.1940	3.4492
	1990	0.1796	3.0018	0.6214	1.0554	1.1217	3.4076
	1991	0.1842	1.8072	0.6777	0.9404	0.9013	3.5504
	1992	0.2379	1.8947	0.5218	0.8060	0.5763	1.5438
	1993	0.2525	0.6328	0.5425	0.6528	0.5291	1.3378

Shaded areas indicate ratios that are less than one and statistically significant.

Assignments

Tables II.3 through II.6 present the odds ratios for enlisted and officer career-enhancing assignments as identified by the services in their respective MEOAs. For the gender and racial makeup of the eligible pools and of who was selected, we used data reported in the MEOAs. As previously noted, the Marine Corps data for officer assignments is an accumulation of all its officers in the ranks O-2 through O-6. Although we calculated the odds ratios for this data and they are presented in table II.5, more detailed analysis by more specific assignments may be appropriate before any conclusions are drawn. In addition, the Marine Corps did not report any assignment data for its enlisted personnel.

For several of the assignments, the MEOA data was insufficient for our analysis; these instances are indicated as "no data." In others, no minority candidates were in the eligible pool, and these instances are indicated as "none" in the appropriate odds ratio column. Finally, in the Navy, combat exclusion laws prohibit women from serving aboard submarines, and this is so noted in the chief of the boat assignment for E-9s.

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.3: Odds Ratios for Air Force Enlisted and Officer Career-Enhancing Assignments, Fiscal Years 1989-93

Assignment	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
Enlisted to air staff/ department agencies, E-7 - E-9	1989	3.9097	0.4535	0.9494	1.4572	0.9660	1.8791
	1990	3.2104	0.0152	1.4502	1.7440	0.6044	3.0380
	1991	3.2517	0.0146	0.4330	1.5788	0.1911	0.9592
	1992	2.8859	0.0049	0.0051	1.4386	0.3620	1.8166
	1993	2.7974	0.0314	0.3453	1.6643	0.4885	1.5458
Enlisted to joint organizations, E-7 - E-9	1989	1.6934	0.7205	1.1859	1.0738	1.2106	0.8952
	1990	1.5030	0.7266	1.0322	1.1215	1.2467	1.1134
	1991	1.3086	0.8797	1.1248	1.3232	1.2604	1.5793
	1992	1.4254	0.8530	1.0639	1.1944	1.4149	1.4708
	1993	1.4940	0.8556	0.9407	1.2525	1.2498	1.4879
Enlisted to major commands, E-7 - E-9	1989	1.7872	1.2331	0.7858	0.8391	1.0575	0.8913
	1990	1.5703	0.8979	0.7225	0.7909	0.8933	0.4961
	1991	1.6253	0.8617	0.9175	0.7303	0.7977	1.0164
	1992	1.5181	0.8365	0.8134	0.9205	0.8188	0.8071
	1993	1.5190	0.7729	1.0390	0.9516	1.0464	1.2634
Officers to air staff/ department agencies, O-3 - O-5	1989	0.7299	1.1338	0.4364	0.5992	0.5137	0.3536
	1990	1.3109	1.0389	0.4636	0.7202	0.5857	0.2844
	1991	0.8688	0.7830	0.5521	0.9370	0.6396	0.3081
	1992	0.9560	0.8219	0.6633	1.1521	0.7903	0.5348
	1993	0.9406	1.8756	0.7757	1.3833	0.8129	0.5367
Officers to joint organizations, O-3 - O-5	1989	0.7681	0.9572	0.8263	1.2027	1.1559	0.7872
	1990	1.1658	1.0211	1.0783	1.1829	1.1137	0.9566
	1991	0.7615	0.9127	1.3096	1.2055	1.2746	0.6792
	1992	0.7556	1.0508	1.1914	1.2559	1.4607	0.4947
	1993	0.7724	1.1306	1.4616	1.4349	1.4611	0.4401

Shaded areas indicate ratios that are less than one and statistically significant.

(Continued on next page.)

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.3

Assignment	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
Officers to major commands, O-3 - O-5	1989	0.7516	1.1253	1.0037	0.9782	0.8600	0.6032
	1990	1.3258	1.2051	0.9388	1.0801	1.0397	0.8754
	1991	0.8735	1.3235	0.8915	1.1437	1.2071	0.9112
	1992	0.8325	1.0527	0.9509	1.2072	0.8616	0.4297
	1993	0.8290	1.3023	0.9824	1.2830	0.8931	0.4037

Shaded areas indicate ratios that are less than one and statistically significant.

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.4: Odds Ratios for Army Enlisted and Officer Career-Enhancing Assignments, Fiscal Years 1989-93

Assignment	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
Command sergeant major, E-9	1989	1.4288	0.0297	1.3968	1.0986	1.3519	0.6093
	1990	0.8980	2.5876	0.6246	1.2552	1.2024	1.8141
	1991	3.2607	0.0449	1.0839	0.9639	1.8148	0.4193
	1992	1.9787	2.2346	0.6069	1.0778	0.9835	0.7064
	1993	0.7737	0.0445	1.4759	0.8767	1.2537	1.1726
Combat arms command, O-5	1989	No data	3.2068	1.7103	1.2216	0.0174	2.1379
	1990	No data	0.9864	1.1508	0.9085	0.7268	0.9864
	1991	No data	0.0050	0.9526	1.3337	0.0050	0.5129
	1992	0.0359	3.2342	1.1761	1.4098	0.3598	1.6171
	1993	0.0351	3.1606	0.5747	0.3913	0.8620	1.3546
Combat support command, O-5	1989	No data	0.0096	1.2939	1.7252	0.8087	0.0096
	1990	No data	0.0075	1.6849	1.2637	0.0075	4.0438
	1991	No data	None	0.8392	2.1302	0.0069	1.1538
	1992	1.0457	0.0058	0.0058	0.7168	5.5178	1.5508
	1993	2.3141	13.8600	1.1550	0.3878	1.1601	1.7325
Combat service support, O-5	1989	No data	0.0100	1.2166	1.1269	3.5686	0.0100
	1990	No data	0.0594	0.9733	1.1637	2.4332	0.9733
	1991	1.6086	None	12.8042	0.3430	0.8535	0.0130
	1992	0.6872	0.0357	1.9086	0.6833	0.8040	0.8187
	1993	2.0677	0.0067	0.0057	1.0682	0.5278	0.0061
Combat arms command, O-6	1989	No data	0.0089	0.0089	0.6479	2.9965	0.0089
	1990	No data	0.0115	2.2041	1.5429	0.0115	0.0115
	1991	0.0086	0.0086	2.3200	0.5949	0.0086	2.9000
	1992	0.0135	0.0135	0.0135	2.4627	2.0067	0.0135
	1993	0.0241	0.0241	0.0241	0.8488	1.0803	None

Shaded areas indicate ratios that are less than one and statistically significant.

(Continued on next page.)

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.4

Assignment	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
Command support command, O-6	1989	No data	None	0.0065	0.9639	11639.52	0.0065
	1990	No data	None	0.0072	1.6036	0.0072	0.0072
	1991	0.0083	None	0.0083	2.3413	14921.68	0.0083
	1992	2.0541	None	0.0092	1.0270	0.0092	0.0092
	1993	0.0025	None	4.5833	1.2500	0.0025	0.0025
Combat service support, O-6	1989	No data	0.0077	0.0077	1.5221	0.0077	0.0077
	1990	No data	0.0058	0.0058	1.2963	1.5556	0.0058
	1991	6.8930	0.0086	3.8295	1.2765	0.0086	0.0086
	1992	1.7782	8.8909	0.0066	1.3172	0.0066	None
	1993	0.8853	0.0062	0.0062	0.7570	1.6901	0.0062

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.5: Odds Ratios for Marine Corps Officer Career-Enhancing Assignments, Fiscal Years 1989-93

Assignment	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
Commanding officer or executive officer (O2-O6)	1989	0.4338	0.3769	0.6391	0.7810	0.8153	60.1366
	1990	0.7228	0.3302	0.6731	1.1051	0.7083	3.4699
	1991	0.7516	0.3472	0.7083	0.7966	0.8536	7.3939
	1992	0.7465	1.1010	0.3478	0.7218	0.6168	1.5181
	1993	1.0228	0.2771	0.5869	1.3322	0.5998	1.8118

Shaded areas indicate ratios that are less than one and statistically significant.

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.6: Odds Ratios for Navy Enlisted and Officer Career-Enhancing Assignments, Fiscal Years 1989-93

Assignment	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
Command master chief, E-9	1989	0.3979	1.4407	0.1786	0.8383	0.8571	0.5065
	1990	0.6331	1.1227	0.3071	0.9804	0.8995	1.2866
	1991	0.8015	0.6098	0.2193	0.8693	0.7673	0.9025
	1992	1.1465	1.2013	0.2419	1.0900	0.5555	0.4684
	1993	0.9756	1.1792	0.3274	0.9057	0.4843	0.2540
Chief of the boat (submarines), E-9	1989	Women cannot serve	Data not reported in MEOA				
	1990						
	1991		1.0232	0.1599	1.2106	1.8125	0.0174
	1992		1.2530	0.0560	1.0424	1.1059	0.0088
	1993		1.6503	0.1800	1.1915	0.3464	0.0209
Commanding officer, O-4	1989	1.5069	0.9304	0.6848	1.9174	1.5261	2.1491
	1990	1.8690	0.9110	1.1891	1.1252	1.3578	2.0046
	1991	1.8194	0.8681	0.9822	0.9198	1.2077	1.5146
	1992	2.1991	0.0214	1.0531	0.9130	0.7069	0.9273
	1993	1.7001	7.2691	1.7568	1.6729	5.5799	5.4065
Executive officer, O-4	1989	0.9689	0.7226	0.6831	0.9566	0.9847	0.4631
	1990	1.0771	1.3684	0.8245	1.1418	0.8872	0.3692
	1991	2.5302	0.6826	0.5893	1.0360	0.5755	0.1536
	1992	1.7734	0.0262	0.7926	1.0749	0.3167	0.2053
	1993	1.2929	0.8190	0.5887	1.1798	0.6191	3.9746
Commanding officer, O-5	1989	0.4746	0.2079	0.1798	0.5085	0.5148	0.2271
	1990	0.6209	0.7680	0.1737	0.9928	0.4963	0.3230
	1991	0.4646	1.0472	0.1173	0.7753	0.4452	0.3900
	1992	0.4434	2.5849	0.2087	0.7366	0.8388	0.4846
	1993	1.2240	1.0893	0.3297	1.7229	0.6616	8.6717

Shaded areas indicate ratios that are less than one and statistically significant.

(Continued on next page.)

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.6

Assignment	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
Executive officer, O-5	1989	0.8934	2.5794	0.1911	0.7352	0.7042	0.3516
	1990	3.4065	1.2933	0.1129	0.7388	0.5270	0.3204
	1991	0.7130	1.5895	0.2507	1.0884	1.2418	0.7385
	1992	0.8343	0.8605	0.3510	1.4478	0.9817	0.3714
	1993	0.3925	1.8284	0.2977	0.3057	0.2724	8.0318
Commanding officer, O-6	1989	0.5012	1.4633	0.1762	1.5416	1.2947	0.0154
	1990	0.5017	1.3922	0.1999	2.2219	1.0630	0.0064
	1991	0.4264	2.1263	0.2996	1.7305	0.6400	0.0060
	1992	0.4576	1.6544	0.1254	1.3835	0.6745	0.0084
	1993	0.3804	5.1950	0.0104	0.7322	2.1266	16334.0

Shaded areas indicate ratios that are less than one and statistically significant.

Promotions

Tables II.7 and II.8 present the odds ratios for enlisted and officer promotion boards, respectively, for each of the services. For the gender and racial makeup of the eligible pools and of who was selected, we used data reported in the MEOAS. In several instances, no promotion boards were held, or data was not reported in the service's MEOA for a particular rank, service, and year; these are noted as appropriate. In other instances, no minority group candidates were in the eligible pool for promotion to a particular rank; we have indicated these as "none" in the appropriate ratio column.

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.7: Odds Ratios for the Services' Enlisted Promotion Boards, Fiscal Years 1989-93

Board	Service	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
E-7	Air Force	1989	0.8642	0.8658	0.8238	1.0321	0.8097	0.8884
		1990	0.9437	0.7742	1.1741	1.2135	0.9805	1.0716
		1991	0.8899	0.8520	0.7894	0.9048	0.7808	0.8330
		1992	1.0017	0.8487	1.1222	1.1523	0.8541	1.0908
		1993	0.9832	0.8676	1.0512	1.1526	0.8800	1.3843
	Army	1989	1.2595	0.3166	1.0638	0.9173	1.1085	0.9291
		1990	1.4149	0.5656	1.3420	0.9897	1.2138	1.2278
		1991	1.4728	0.6699	1.0932	0.7121	0.9739	0.7908
		1992	No data in MEOA					
		1993	1.0863	1.2197	1.0537	0.7821	1.1599	1.0841
	Marine Corps	1989	1.7710	0.6544	0.6424	0.9461	1.0340	0.8881
		1990	1.6421	0.7697	1.6624	0.8697	1.1975	1.1270
		1991	0.9978	0.7208	0.7632	0.7668	0.7984	0.9980
		1992	1.0957	0.4462	0.7840	0.7893	0.6039	1.6178
		1993	1.1550	0.6587	0.6035	0.9217	1.1239	1.0090
	Navy	1989	0.7633	0.7217	1.1555	0.7680	0.9170	1.0291
		1990	1.0108	0.7344	0.8337	0.7115	0.8630	0.7978
		1991	0.8856	0.4837	0.7573	0.7625	0.8601	0.7159
		1992	1.0836	0.8352	0.7162	0.7376	0.9829	0.7475
		1993	1.5856	0.8124	1.0095	0.9641	0.6244	0.7125
E-8	Air Force	1989	1.5477	0.5953	0.9465	0.7534	0.7895	0.8776
		1990	1.5683	1.0852	0.7665	0.8593	0.6202	0.5081
		1991	1.4257	1.0710	0.6906	0.7572	0.7899	0.9066
		1992	1.3055	0.8011	0.6271	0.8951	0.8100	1.1561
		1993	1.1999	0.8999	0.7835	0.9062	0.9680	0.7782

Shaded areas indicate ratios that are less than one and statistically significant.

(Continued on next page.)

**Appendix II
Results of Racial and Gender Disparity
Analysis**

Table II.7

Board	Service	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
	Army	1989	1.3833	0.5741	1.4633	1.1343	1.2639	1.2861
		1990	1.7185	0.4961	1.4670	1.0163	1.1591	1.3630
		1991	1.5004	1.4905	1.0069	0.8824	1.0437	1.0453
		1992	1.0334	1.6122	0.9276	0.9556	1.0168	1.1103
		1993	0.6293	1.2948	0.5913	0.9016	1.0647	0.9245
	Marine Corps	1989	1.0337	1.5760	0.6329	0.6681	0.8334	3.7965
		1990	1.1681	1.1911	0.9731	0.7668	1.0688	1.1296
		1991	1.4591	0.8223	1.0964	0.7555	0.7668	None
		1992	0.9862	178.4597	0.9903	1.0296	1.7330	0.4951
		1993	0.7710	0.5285	1.4732	0.8349	0.8404	1.3726
	Navy	1989	1.0016	0.9512	1.2961	1.2433	0.9357	0.7927
		1990	1.1225	0.7625	1.0363	0.8945	1.3599	1.2516
		1991	1.0359	0.8720	0.8752	1.0805	0.8592	0.6410
		1992	1.0957	1.1558	0.7354	1.0122	1.0690	0.8631
		1993	0.9126	1.1589	0.8327	0.8876	1.0600	0.9559
E-9	Air Force	1989	0.7427	0.6583	1.2760	0.8075	0.8624	0.5848
		1990	1.5976	0.8879	1.2153	0.8541	0.9726	1.3851
		1991	1.9347	0.6824	0.9980	0.6365	0.8786	0.4758
		1992	1.7214	1.1092	0.7457	1.0406	1.0919	0.7303
		1993	1.8559	1.1659	0.6520	0.9856	1.1297	0.9644
	Army	1989	1.8738	0.0272	0.8856	0.8623	1.1256	0.8269
		1990	3.1606	2.0544	1.1533	0.8391	1.2309	0.8547
		1991	2.0359	0.6353	0.8604	1.0942	1.1674	1.2895
		1992	2.0317	0.0406	1.0896	1.0016	0.5372	1.1347
		1993	0.7425	4.7348	0.9633	1.1058	0.9604	1.1615

Shaded areas indicate ratios that are less than one and statistically significant.

(Continued on next page.)

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.7

Board	Service	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
	Marine Corps	1989	0.8288	0.0020	0.0020	0.6030	0.4410	1.9570
		1990	0.5393	2.7198	0.7555	0.6285	0.5026	0.0018
		1991	0.8405	1.1518	0.6582	0.7845	0.8359	1.1518
		1992	3.1315	0.0051	0.9257	0.8533	1.0414	0.9257
		1993	2.1657	0.7711	2.3081	0.8929	1.0795	0.6379
	Navy	1989	1.1601	0.7917	1.6056	0.6743	0.9989	0.7852
		1990	1.6449	1.5559	1.0611	1.1283	0.8096	0.6779
		1991	0.9486	0.6946	1.0166	0.9009	1.0950	1.1298
		1992	0.9274	1.1748	0.6998	1.1184	1.0870	0.8897
		1993	2.4397	0.9462	0.7025	1.6107	1.2417	0.0171

Shaded areas indicate ratios that are less than one and statistically significant.

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.8: Odds Ratios for the Services' Officer Promotion Boards, Fiscal Years 1989-93

Board	Service	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
O-4	Air Force	1989	No promotion boards					
		1990	1.0033	0.3111	0.7435	0.3839	0.9335	0.0209
		1991	1.3517	0.4418	1.4698	0.8926	0.8304	0.7151
		1992	No promotion boards					
		1993	1.6321	0.3701	0.6850	1.0573	1.2101	0.9967
	Army	1989	1.1662	0.4470	1.1978	1.0346	1.0971	1.0216
		1990	1.0980	36.1552	1.3148	0.9904	1.0209	1.1027
		1991	No promotion boards					
		1992	0.7847	25.5473	0.8415	0.6425	0.4185	0.7374
		1993	1.2245	0.2120	0.8880	0.6814	0.4715	0.4822
	Marine Corps	1989	0.3968	81.7193	0.4535	1.3604	0.0025	None
		1990	0.6641	1.4942	0.6973	0.4754	0.4214	None
		1991	0.6673	None	1.4868	0.6287	0.4956	None
		1992	0.7790	0.5463	1.4465	0.3838	0.8036	None
		1993	3.5902	89.2785	0.9908	0.3685	1.2385	None
	Navy	1989	1.0454	1.2963	1.0081	0.5930	0.8355	1.7140
		1990	2.1433	1.7258	0.8597	0.8569	2.8973	1.2830
		1991	0.8960	3.1432	0.5214	1.1034	0.9857	0.7961
		1992	1.0789	0.1632	0.6765	0.4888	1.0083	6.4109
		1993	1.1284	2.7111	1.1588	0.9344	1.1039	0.9799
O-5	Air Force	1989	1.6443	0.9753	0.5172	0.5180	0.3785	1.0997
		1990	1.4136	0.3457	1.5455	0.6366	0.9175	2.7648
		1991	1.1794	2.5937	0.9079	0.7279	1.0733	1.2971
		1992	0.8979	0.5406	0.4232	0.8461	0.4682	3.2576
		1993	1.2552	1.9230	0.2612	0.8292	0.7647	0.5498

Shaded areas indicate ratios that are less than one and statistically significant.

(Continued on next page.)

**Appendix II
Results of Racial and Gender Disparity
Analysis**

Table II.8

Board	Service	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
	Army	1989	1.9453	1.3245	3.0901	1.2320	1.5051	1.1725
		1990	1.0397	0.9824	1.1269	1.0633	1.2258	1.3200
		1991	1.2825	1.2526	1.1083	0.9825	1.1744	1.0737
		1992	1.1543	2.7836	0.7826	0.7776	0.6002	0.7826
		1993	1.2510	0.1188	1.1306	0.4044	0.4862	0.7116
	Marine Corps	1989	0.7015	0.0035	0.3118	0.2598	0.6236	None
		1990	0.6454	0.0036	0.2151	1.5673	0.8605	None
		1991	1.0032	120.5696	0.4460	0.4459	0.5575	None
		1992	1.9732	396.4445	396.4445	0.8386	0.8048	None
		1993	1.9970	None	0.3983	0.2887	1.1948	None
	Navy	1989	1.0837	0.1488	0.8422	0.8726	2.1358	0.9317
		1990	1.1082	2.2596	275.2440	0.7340	1.6602	0.6754
		1991	1.0598	0.5054	0.7610	0.9579	1.0677	1.4351
		1992	0.9598	1.9428	0.7858	0.8931	0.7285	0.5340
		1993	0.9623	1.7889	0.6429	0.9210	0.9011	1.2999
O-6	Air Force	1989	0.4426	2.4784	0.4131	0.8675	0.7745	0.0190
		1990	0.7588	1.2646	0.7588	0.9484	0.9033	0.6324
		1991	1.4785	0.3593	0.6256	1.8071	2.2518	1.2511
		1992	2.1078	0.9352	0.4687	0.6495	1.0020	1.4029
		1993	1.5160	0.0219	1.0709	1.6824	0.7933	1.4279
	Army	1989	2.2178	0.0658	1.5138	1.4468	1.5138	1.5138
		1990	0.9768	0.5662	2.5420	1.3181	0.3823	0.5695
		1991	1.0483	1.0674	0.3274	1.1200	1.3724	1.2742
		1992	0.6302	601.0864	2.0337	0.8877	0.5454	0.0025
		1993	0.5484	324.5359	1.6260	1.3008	1.3661	1.3008

Shaded areas indicate ratios that are less than one and statistically significant.

(Continued on next page.)

Appendix II
Results of Racial and Gender Disparity
Analysis

Table II.8

Board	Service	Fiscal year	Females F:M	American Indians AI:W	Asians A:W	Blacks B:W	Hispanics H:W	Other O:W
	Marine Corps	1989	617.8302	None	0.0025	617.8302	None	None
		1990	1.2381	0.0025	None	0.3095	0.0025	None
		1991	0.3437	None	None	0.8173	1.3621	None
		1992	1.2880	0.0026	634.4615	1.7173	1.2880	None
		1993	1.4198	0.0029	1.4198	1.0648	0.7099	None
	Navy	1989	1.3313	None	0.4297	4.1425	1.6103	0.7157
		1990	1.0611	0.5848	1.8924	573.5065	2.2935	0.7613
		1991	0.8135	0.4607	0.2194	0.9405	0.8022	0.7358
		1992	0.8362	0.9469	0.7101	0.7015	3.7874	0.0158
		1993	0.9617	0.3809	0.1988	1.1506	0.8144	1.9190

Comments From the Department of Defense



FORCE MANAGEMENT
POLICY

ASSISTANT SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000



SEP 11 1995

Mr. Mark E. Gebicke, Director
Military Operations and
Capabilities Issues
National Security and
International Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

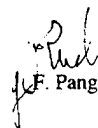
Dear Mr. Gebicke:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "MILITARY EQUAL OPPORTUNITY: Certain Trends in Racial and Gender Data May Warrant Further Analysis," dated August 7, 1995 (GAO Code 703054) OSD Case 9990. The DoD concurs with the GAO report.

In 1994, the Secretary of Defense re-established the Office of the Deputy Assistant Secretary of Defense for Equal Opportunity (DASD(EO)) as a focal point for military and civilian equal opportunity programs, and the Deputy Assistant Secretary was appointed in February, 1995. Upon assuming office, the DASD(EO) established priorities to improve civilian and military equal opportunity programs. Since improvement of the Military Equal Opportunity Assessment (MEOA) process is one of these priorities, efforts are already underway to make the improvements recommended by the GAO.

The DoD plans to work with representatives of the Services and their Reserve Components to accomplish the recommendations contained in the draft GAO report and publish a revised DoD Instruction by April 30, 1996. In addition, the DoD has contracted-out the process for the DoD annual analyses and summary of the MEOA submissions for Fiscal Year 1994. The Department has also budgeted to contract-out this process for the Fiscal Year 1995. While the contractors develop the technical aspects of the required analyses and summaries for 1995 and 1996, the DoD will be simultaneously working on improving the MEOA process and revising the DoD Instruction 1350.3, "Affirmative Planning and Assessment Process".

The DoD appreciates the opportunity to respond to the draft report. The detailed DoD comments on the GAO recommendations are provided in the enclosure. The GAO recommendations are consistent with the DoD vision to improve equal opportunity programs.


J. F. Pang

Enclosure
As stated



GAO DRAFT REPORT--DATED AUGUST 7, 1995
(GAO CODE 703054) OSD CASE 9990

"MILITARY EQUAL OPPORTUNITY: CERTAIN TRENDS IN RACIAL AND
GENDER DATA MAY WARRANT FURTHER ANALYSIS"

DEPARTMENT OF DEFENSE COMMENTS
ON THE GAO RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense direct the Deputy Assistant Secretary of Defense for Equal Opportunity (DASD(EO)) to devise methodologies for analyzing the Military Equal Opportunity Assessments (MEOA) data that would more readily identify possible racial and gender disparities than current methods permit and establish criteria for determining when disparities warrant more in-depth analyses. (p. 16/GAO Draft Report)

DoD Response: Concur. The DoD has already developed a plan to work with the Services, the Defense Equal Opportunity Management Institute, the Defense Manpower Data Center, and other offices, to establish a methodology for analyzing MEOA data. Work on the revised methodology will begin in September 1995 and will be completed in time so that it can be used for the Fiscal Year 1995 MEOAs. The DoD plans to include the methodology in a draft revision to DoD Instruction 1350.3, "Affirmative Action Planning and Assessment Process". The draft revision should be completed in November 1995 with issuance of the final version expected by April 30, 1996.

RECOMMENDATION 2: The GAO recommended that the Secretary of Defense direct the DASD(EO) to ensure that the Services (1) use comparable definitions and interpretations in addressing the MEOA categories and (2) provide complete information for each of the MEOA categories.
(p. 16/GAO Draft Report)

DoD Response: Concur. The revised DoD Instruction will clarify definitions and interpretations for the MEOA categories to ensure uniformity and comparability in Service submissions. During the revision process, the DoD will examine in detail each of the ten MEOA reporting categories and the amount of information required at DoD and Service levels.

Enclosure
Page 1 of 2

Now on p. 9.

RECOMMENDATION 3: The GAO recommended that the Secretary of Defense direct the DASD(EO) to prepare the analyses of the Services' annual MEOAs and the DoD summary, as required. (p. 16/GAO Draft Report)

DoD Response: Concur. The office of the DASD(EO) contracted-out the technical aspects of the analyses and summaries for the Fiscal Year 1994 MEOA reports. The office has also budgeted for contracting out the technical aspects of the Fiscal Year 1995 MEOAs. Following receipt of the technical analyses, the office of the DASD(EO) will prepare the DoD feedback to the Services and the DoD summary of the MEOA reports as required by the current DoD Instruction 1350.3, "Affirmative Action Planning and Assessment Process". Analysis of the Fiscal Year 1994 MEOA reports should be completed and provided to the Services by October 31, 1995.

Major Contributors to This Report

National Security and
International Affairs
Division, Washington,
D.C.

Sharon A. Cekala, Associate Director
A.H. Huntington, III, Assistant Director
Laura L. Talbott, Evaluator-in-Charge
Frank Bowen, Senior Evaluator
Kerry A. O'Brien, Evaluator

General Government
Division, Washington,
D.C.

Douglas M. Sloane, Social Science Analyst